Canyon Sewer Cleaning Program and Long Term Sewer Maintenance Program Progress Report

City of San Diego

Public Utilities Department

September 2012

Cover: Left top: Flat-top buckwheat (Eriogonum fasciculatum), Right top: coast barrel cactus (Ferocactus viridescens), Left bottom: toyon (Heteromeles arbutifolia), Right bottom: mountain mahogany (Cercocarpus minutiflorus)

TABLE OF CONTENTS

LIST OF FIGURES

TABLES

EXECUTIVE SUMMARY

In response to an Administrative Order from the U.S. Environmental Protection Agency, in an effort to reduce sewer spills and beach closures, and under the direction of Council Policies 400-13 and 40-14, the City of San Diego's Public Utilities Department (Public Utilities), has adopted the Canyon Sewer Cleaning Program and the Long-term Canyon Sewer Maintenance Program (Program) to access, clean, and repair miles of sewer infrastructure located in canyons and other environmentally sensitive areas.

A Programmatic Environmental Impact Report (PEIR) was prepared to study the Program and in July 2004, the City of San Diego approved Coastal Development Permit No. 13506 and Site Development Permit No. 13507 for the Program.

The objectives of the Canyon Sewer Cleaning Program and the Long-Term Canyon Sewer Maintenance Program are:

- To complete the inspection and cleaning of City of San Diego sewer infrastructure located in canyons and other environmentally sensitive lands.
- To identify and implement efficient, effective, and environmentally sensitive means to accomplish the necessary canyon sewer cleaning activities.
- To provide for long-term maintenance of canyon sewer infrastructure, recognizing that availability of access to the infrastructure is essential for an effective long-term program, in accordance with Council Policy 400-13.
- To evaluate and pursue options to redirect sewage flows out of canyons and into street sewer lines or other accessible areas, where feasible and appropriate pursuant to Council Policy 400-14.

This annual report, as required by the site development permit condition 27, provides a Progress Report to the Open Space Canyons Advisory Committee (OSCAC) on the Program for the year from July 2011 through June 2012. The report provides the status of all Program mitigation sites and a summary on planning and implementation of projects within the reporting year, including redirection of flow (ROF) studies, long term access planning and implementation, construction and emergency projects, and 25 month revegetation and restoration projects.

LONG TERM ACCESS PROJECTS

Long Term Access Projects are to provide access paths for routine maintenance and emergency repairs. One of the first steps in determining whether an access path is needed is to prepare a redirection of flow (ROF) study. A ROF study evaluates the economic feasibility of removing all or part of the sewer from the canyon versus providing access to the sewer if it remains in the canyon.

When redirection of flow is found to be infeasible from all or portions of environmentally sensitive lands/canyons, City staff will develop a Long Term Maintenance and Emergency Access Plan in accordance with Policy 400-13. Staff then prepare and submit Process 2 (Substantial Conformance Review- SCR) applications to the Development Services Department (DSD) for a determination whether the proposed mitigation, restoration, and access planning for individual canyon areas or project is in conformance with the Programmatic Environmental Impact Report (PEIR) and Program master permits. Separate permits or clearances are obtained from the regulatory agencies prior to implementation of long term access projects.

Public Utilities previously identified 15 canyons as priority canyons for long term access implementation. The following canyons are in various stages of long term access planning and implementation:

- 32nd Street— Sewer access paths located in upland areas have had wood chips installed and are currently being used by the Wastewater Collection (WWC) Division. Public Utilities staff is starting on the permits and developing contract documents for constructing improvements to streambed crossing areas.

- 45th & Boston—Implementation of long term access for this canyon has been completed. The paths have been surveyed and marked, vegetation has been cleared, and wood chips have been installed on the path. Public Utilities has acquired all access rights with the signing of the last easement in July 2012.

- Alvarado—The design for this project is complete. Public Utilities staff is starting on the permits, property acquisition, and developing contract documents.

- Black Mountain—Staff have completed all of the field work for this canyon. The access paths have been surveyed and the legal descriptions and plat maps have been completed. An easement with the County of San Diego has been recorded on the property. Staff is in the process of finalizing a Memorandum of Understanding (MOU) with the Park and Recreation Department.

- Carroll Canyon—The biological report has been submitted and is under review for Long Term Access improvements in Carroll Canyon.

- Park Mesa—Construction of the long term access path was completed in summer of 2011. All easements have been acquired with the exception of the United States Navy which is currently under review.

- Rancho Mission – On the east side of Margerum Avenue, access path improvements by City forces were completed in November 2011. The design for an improved streambed crossing on the west side of Margerum Avenue has been completed. Public Utilities staff is starting on the permits, property acquisition, final design review, and developing construction contract documents.

- Tecolote – Final design for East Tecolote Canyon was completed in June 2012. Public Utilities staff is starting on the permits and developing contract documents for constructing access path improvements.

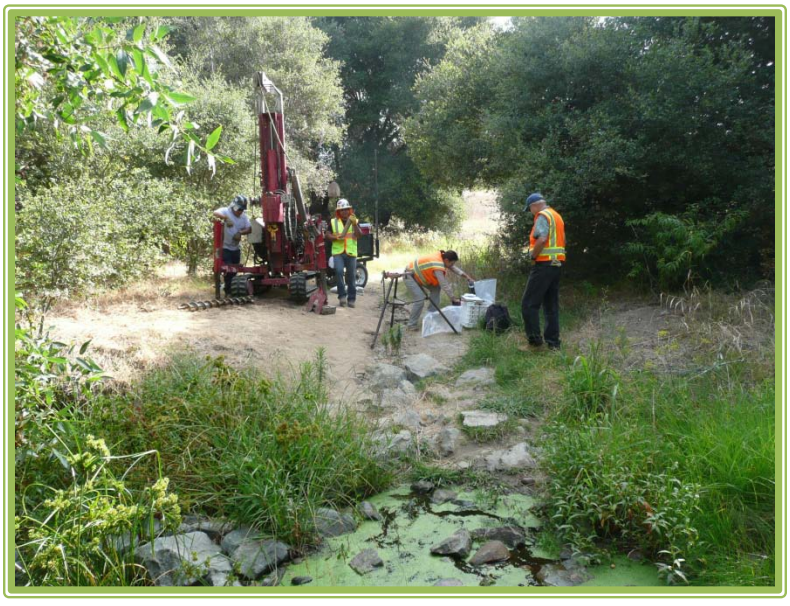
Park Mesa – Long Term Access Path

This past year, Public Utilities staff started working on the design and partial implementation on four new Long Term Access (LTA) projects:

- South Chollas —Public Utilities has prepared a LTA Plan and will continue with obtaining technical studies to support the SCR submittal.
- North Tecolote Canyon – This canyon has an approved conceptual long term access plan. Consultants are working on the design of access paths and streambed crossing improvements. The design work also includes a Geotechnical Report and a Technical Memorandum with design recommendations.

- VanNuys Canyon – Public Utilities received and approved a proposal for a new Redirection of Flow Study and Access Recommendation for the canyon.
- Mt. Elbrus Bridge – In November, 2011, WWC installed a prefabricated fiberglass bridge in Mt. Elbrus Canyon.

Mt. Elbrus Canyon- New Access Bridge



North Tecolote Canyon – Geotechnical Sampling Near Crossing

In addition to the above programs, the Department has increased its efforts to inventory and map existing access to sewers in canyons. This inventory provides information on existing access conditions, identifies access needs and areas of concern (i.e. erosion), and facilitates ongoing maintenance. To date, 152.4 miles of pedestrian and vehicular paths have been mapped with the GPS data for 133 canyon areas.

Access Path Inventory Map for Buchanan Canyon

CONSTRUCTION AND EMERGENCY PROJECTS

During this reporting period two Capital Improvement Program (CIP) projects were completed or are still in construction: USIU-Miramar Trunk Sewer Replacement and Balboa Terrace Trunk Sewer. Planning and permitting is complete or in process for a number of additional projects that are anticipated once contracting is complete or funding is available. These include Buchanan B, Water Group 616, Group Job 691, Group Job 703a, Group Job 799, Alvarado Trunk Sewer Phase 3, and Skylark Canyon Trunk Sewer. These jobs are managed by the Engineering and Capital Projects Department.

Since July 2011, emergency projects and/or pipeline repair projects occurred in the following canyons or environmentally sensitive areas:

Emergencies

- San Diego Mission Road Manhole 111 (manhole raising and cleaning)
- Pump Station 64 (spill and clean-up)
- Euclid and Menlo (pipe repair)
- 10th Ave (pipe repair)
- Middle Rose Manhole 160 (access creation and cleaning)
- Mimulus Way (pipe repair)
- Hotel Circle South (pipe repair)

Other construction projects

- Manhole 190 (manhole raising)
- Otay River Sewer (path maintenance)
- Mt. Elbrus (spot repair)
- Admiral Baker (manhole raising)
- Mission Valley (spot repair)
- Lookout Drive (spot repairs)
- Keighly Street (spot repair)
- Washington Creek (spot repair)
- Yerba Santa (spot repair)
- Laurel Street (spot repair)
- Middle Rose Manhole 9 (cleaning)

Public Utilities staff manage emergency and non-CIP construction projects. Environmental review, monitoring, and reporting are done in adherence with the Program. Biological assessments have been prepared for these emergency and construction projects. Following construction, revegetation and/or restoration has been implemented in accordance with the Program.

San Diego Mission Road MH 111 Emergency Raising & Cleaning

Hotel Circle South Emergency Pipe Pillar Replacement

25 MONTH REVEGETATION AND RESTORATION PROJECTS

Conditions of the Master permit require effective erosion control of access paths and restoration of impact areas outside of path areas following construction. Each impact area is monitored and maintained for a period of no less than 25 months.

Revegetation sites include all areas required for permanent access to utilities including the access paths, turn-arounds, and work areas around manholes. When new access paths and permanent access areas are created, revegetation is required. The goal of revegetation is successful erosion control. Maintenance and monitoring of revegetation areas may include hydroseeding or hand-seeding, weeding, mulching or installing wood chips on the path, installation of temporary Best Management Practices (BMPs), site monitoring or a combination of the above treatments.

Restoration sites are areas impacted outside of permanent access areas. Restoration areas are typically staging areas, emergency access or work areas, unauthorized impact areas, or areas disturbed as a result of temporary widening of pathways. The goal of habitat restoration is re-establishment of native habitat. Restoration areas shall obtain native plant coverage equal to the native species present in the adjacent area or 30% coverage, whichever is greater. Restoration areas shall support no more than 1% perennial weeds and no more than 10% annual weeds during the 25 month maintenance period. Maintenance and monitoring of restoration areas may include hydroseeding or hand-seeding, installation of container plants, weeding, installation of temporary Best Management Practices (BMPs), site monitoring or a combination of the above treatments.

Seed and plant material used for revegetation and restoration efforts is from sites within 25 miles of the coastline in San Diego County. Maintenance and monitoring of all sites continue for 25 months or until successful erosion control is achieved on the paths and/or restoration goals are met outside of the paths.

During this reporting year, eight projects were completed. In addition to eighteen ongoing projects, six additional sites were installed and maintenance and monitoring of these sites was initiated.

Updates of the status of the revegetation and restoration projects are a regular agenda item at OSCAC's meetings. See Page 37-38 for the August 2012 Revegetation and Restoration Projects Status update table.

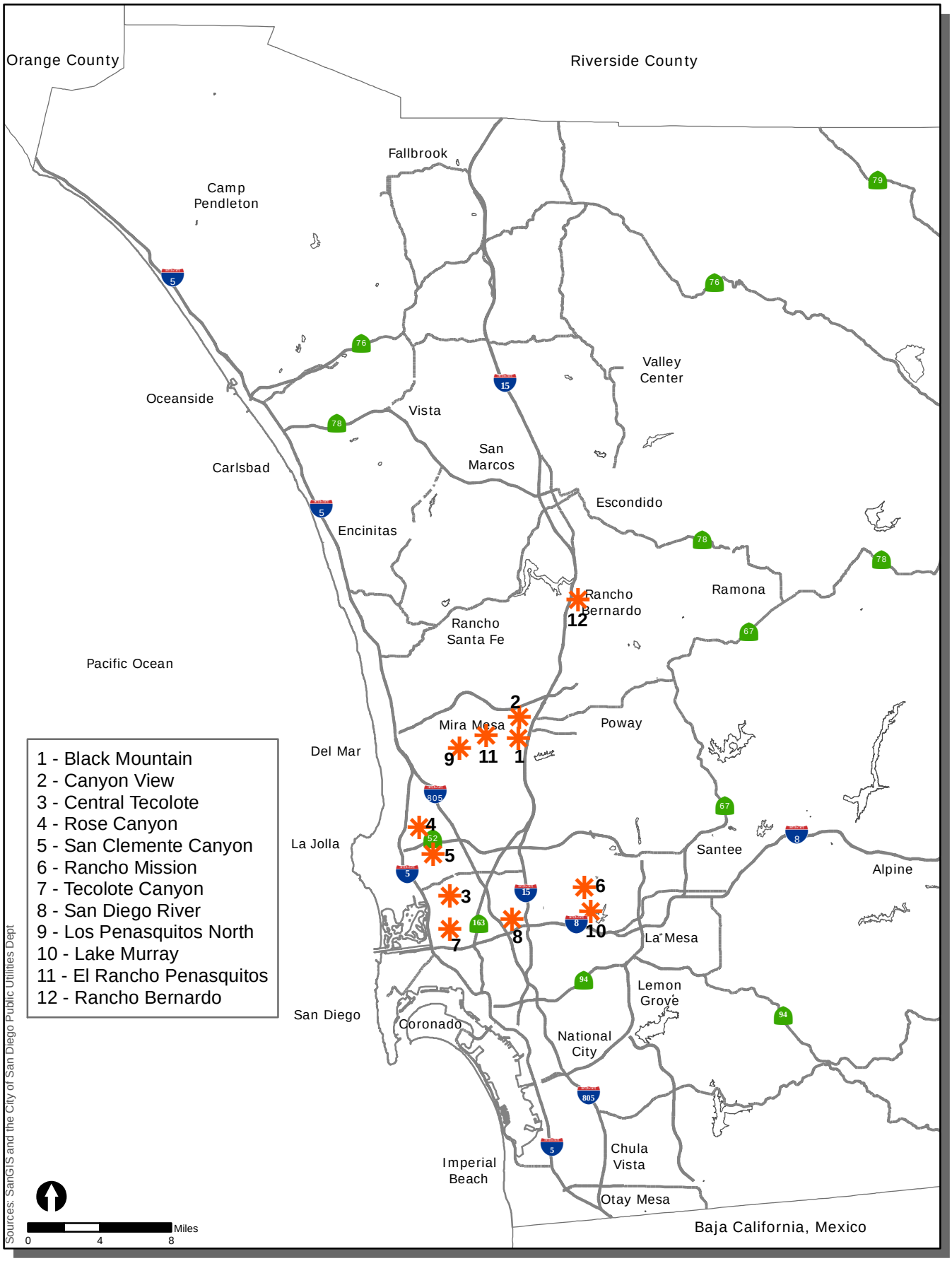
Mission Center Canyon Restoration Project

Rose Canyon Sinkhole Restoration Project

MITIGATION PROJECTS

In accordance with applicable local, state, and federal regulations, restoration, revegetation, or mitigation is required for significant biological impacts resulting from the Program, such as the creation of access paths through environmentally sensitive areas, emergency repairs, and pipeline repair projects. In order to mitigate these impacts, Public Utilities staff has identified and implemented a number of mitigation projects located within various watersheds where past, current, or future impacts have or may occur. These mitigation sites are designed and built to accommodate numerous Public Utilities projects. Allocation of mitigation is completed as each project is being planned. Project impacts and mitigation assignments are tracked internally within the Canyon Database.

The location of these projects is shown in Figure A. The status of each habitat mitigation project is summarized below.



Mitigation Sites

Overview Map

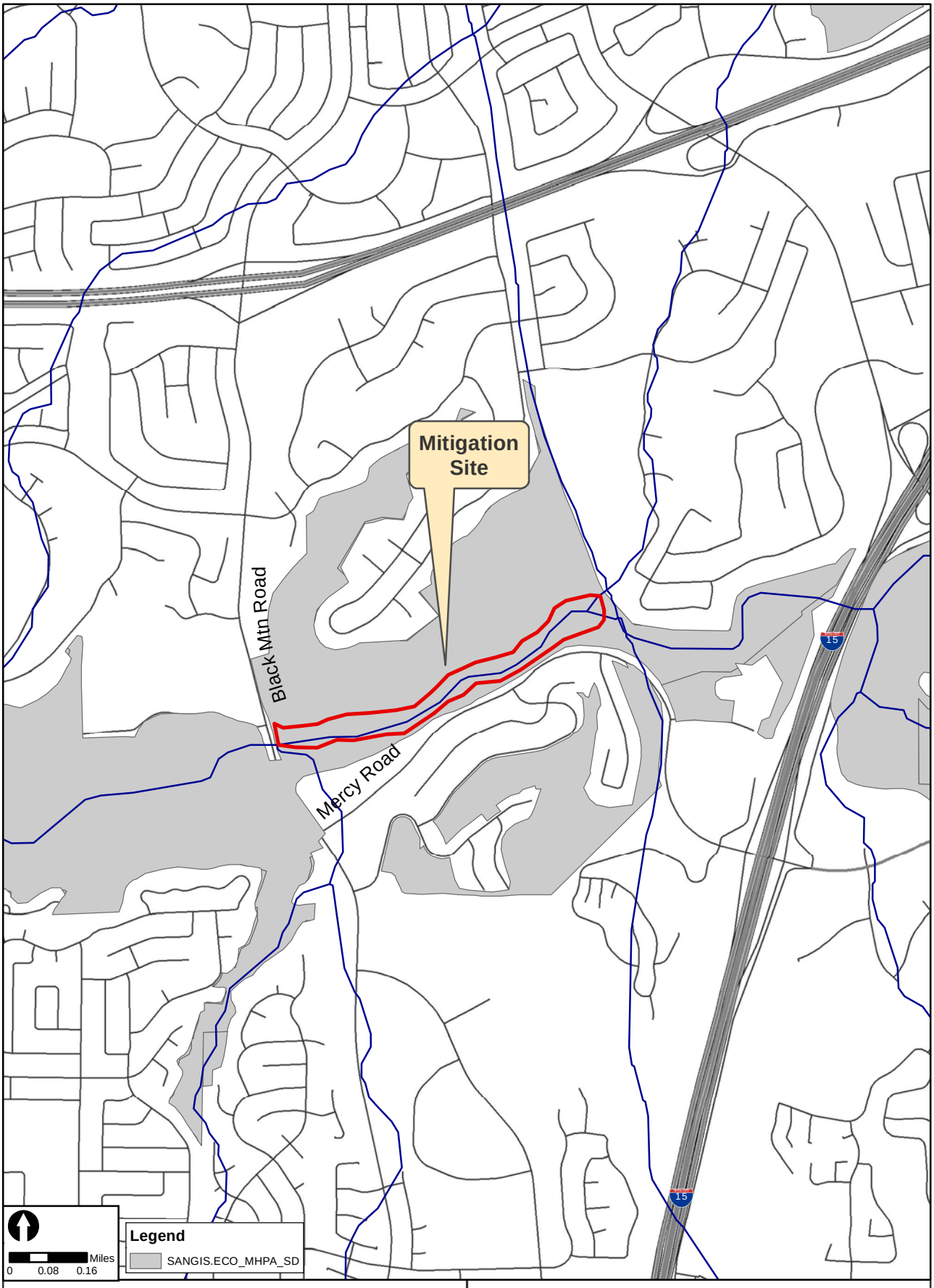
FIGURE A

Black Mountain Wetland Mitigation Project

A conceptual plan is being prepared for this project, to be located west of I-15, east of Black Mountain Road, and north of Mercy Road in Los Penasquitos Canyon (Figure 1). The project area currently supports a large area of invasive non-native plant species that have little value for wildlife. The site currently supports eucalyptus (*Eucalyptus* spp.), Canary Island date palm (*Phoenix canariensis*), Mexican fan palm (*Washingtonia robusta*), Brazilian pepper tree (*Schinus terebinthifolius*), pampas grass (*Cortaderia selloana*), and tamarisk (*Tamarix parviflora*). The goal of the project will be to eradicate all non-native plant species and create native wetland habitat in areas of disturbed uplands. Project components will include eradication of exotic plant species, grading, installation of a temporary irrigation system, planting, seeding, and a 5 year maintenance and monitoring period.

Project implementation is planned for 2013.

Black Mountain Mitigation Project Site

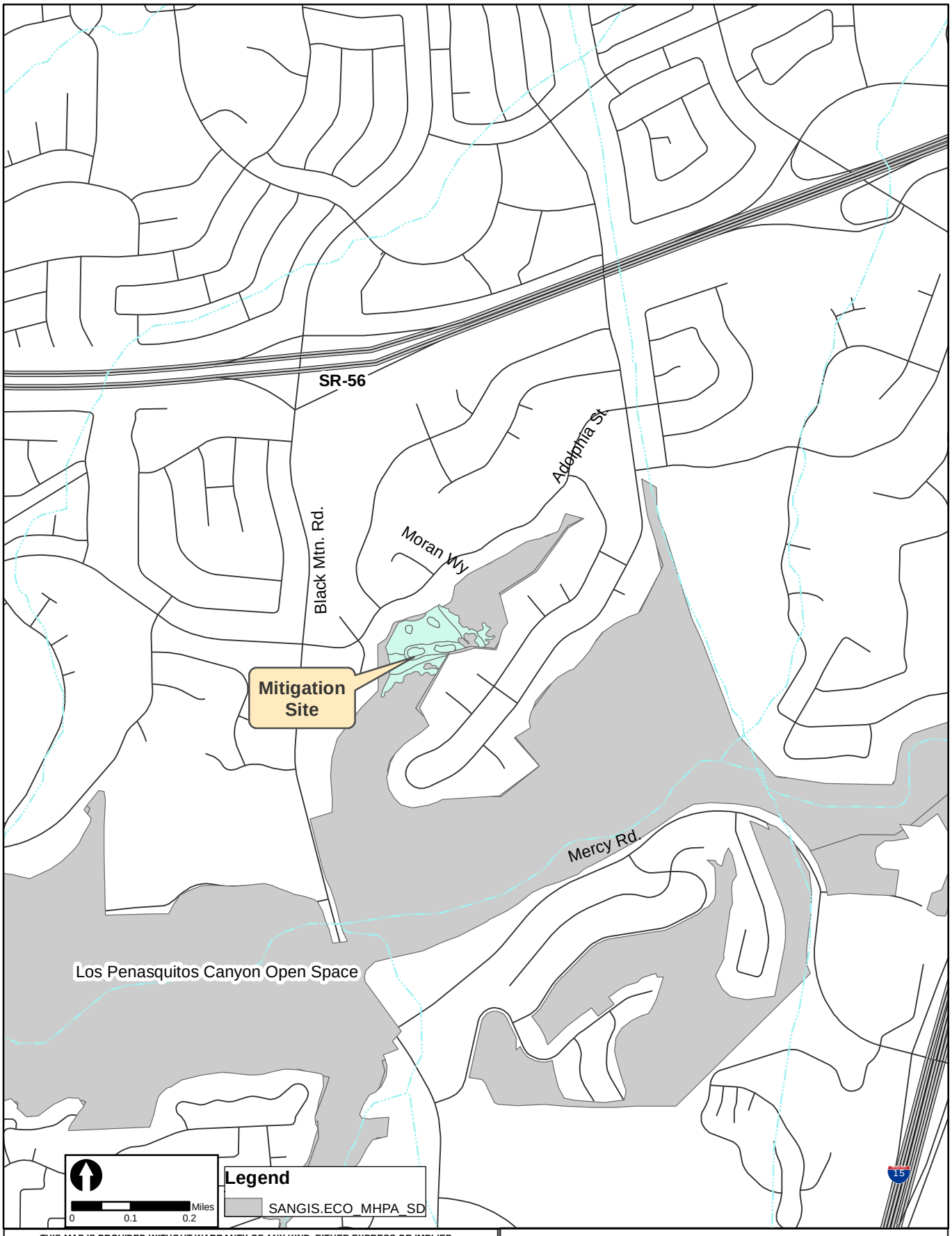


Black Mountain Mitigation Project
Vicinity Map
Figure 1

Canyon View Upland Restoration Mitigation Project

Construction began in September 2011 for this project, located east of Black Mountain Road and south of Adolphia Street in Los Penasquitos Canyon (Figure 2). The project involves the restoration of approximately 0.9 acres of native grassland and 6.79 acres of coastal sage scrub habitat, located on City of San Diego owned parcels within Los Penasquitos Canyon. The project serves to mitigate impacts associated with Public Utilities projects located in Los Penasquitos Canyon Preserve. Exotic species removed from the site include: mustard (*Brassica* sp.), artichoke thistle (*Cynara cardunculus*), tocalote (*Centaurea melitensis*), and many non-native grass species. The project is using recycled water for temporary irrigation during the plant establishment phase and through a portion of the 5 year maintenance and monitoring period. The 120 day Plant Establishment Period (PEP) began in June 2012. The site will be maintained and monitored for the 120-day PEP period and an additional 5-year period until agency sign off. The goal of the project is to restore low quality non-native uplands into high quality native habitats.

Canyon View Upland Restoration Mitigation Project site



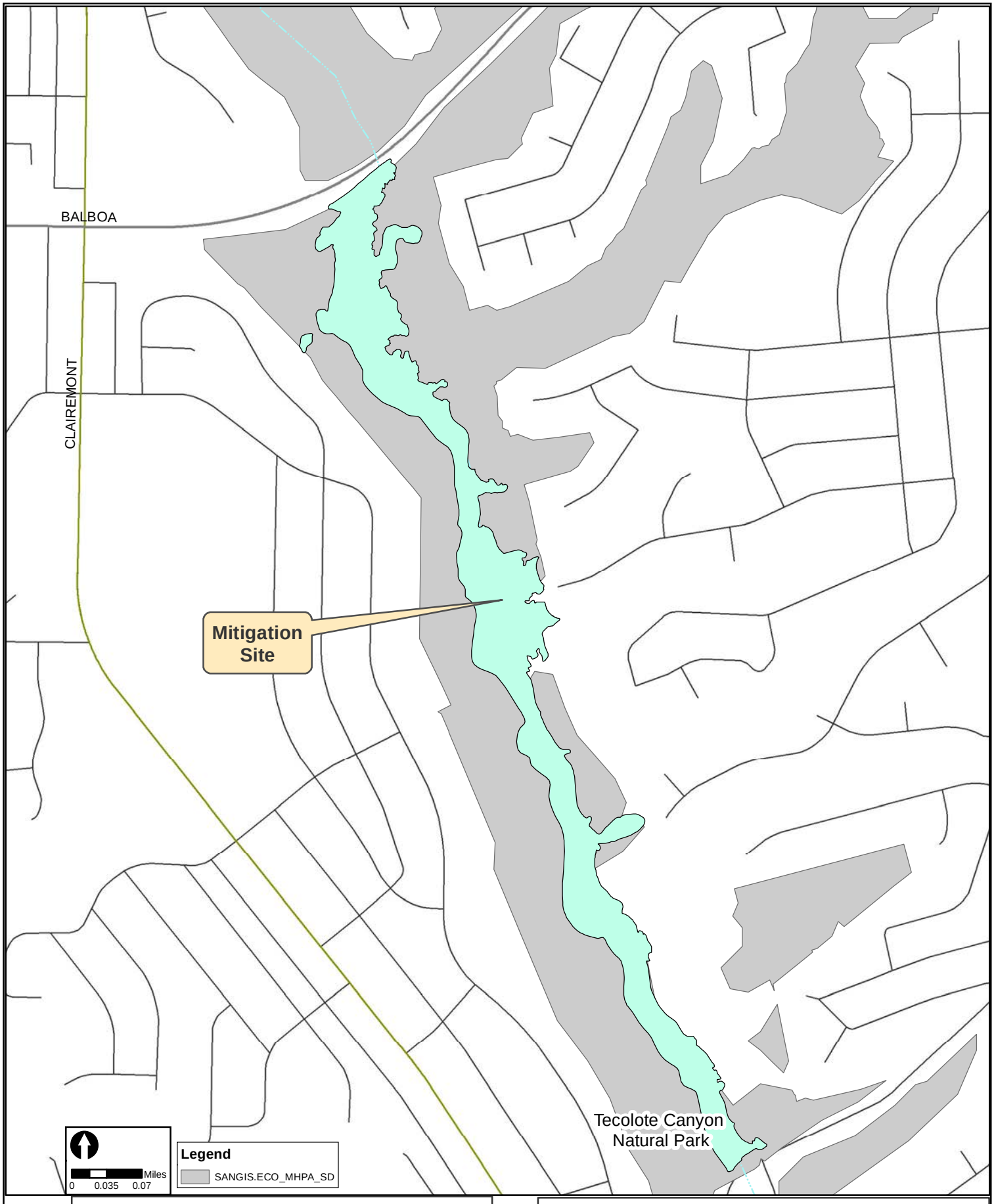
Canyon View Upland Restoration Mitigation Project
Vicinity Map
Figure 2

Central Tecolote Enhancement Mitigation Project

Construction began in February 2011 for this project, located south of Balboa Avenue and north of Mt. Acadia Boulevard in Tecolote Canyon (Figure 3). The project consists of approximately 3.5 acres of riparian enhancement and approximately 3.2 acres of native grassland/coastal sage scrub restoration in addition to a 20+ acre weed management area that encompasses Tecolote Creek.

Exotic species removed from the site include: Brazilian pepper (*Schinus terebinthifolius*), pampas grass (*Cortaderia selloana*), Mexican fan palm (*Washingtonia robusta*), Canary Island date palm (*Phoenix canariensis*), eucalyptus (*Eucalyptus* spp.), fennel (*Foeniculum vulgare*), mustard (*Brassica* sp.), and yellow sweetclover (*Melilotus indicus*). A temporary above ground irrigation system was installed to support the native plant and seed material was installed onsite. The 120 day Plant Establishment Period (PEP) began in July 2011, and ended November 2011, thereby initiating year-1 of the 5 year maintenance and monitoring period. The site will be maintained and monitored for a 5-year period to ensure successful establishment of native species and until agency sign off.

Central Tecolote Enhancement Mitigation Project



Central Tecolote Mitigation
Vicinity Map
Figure 3

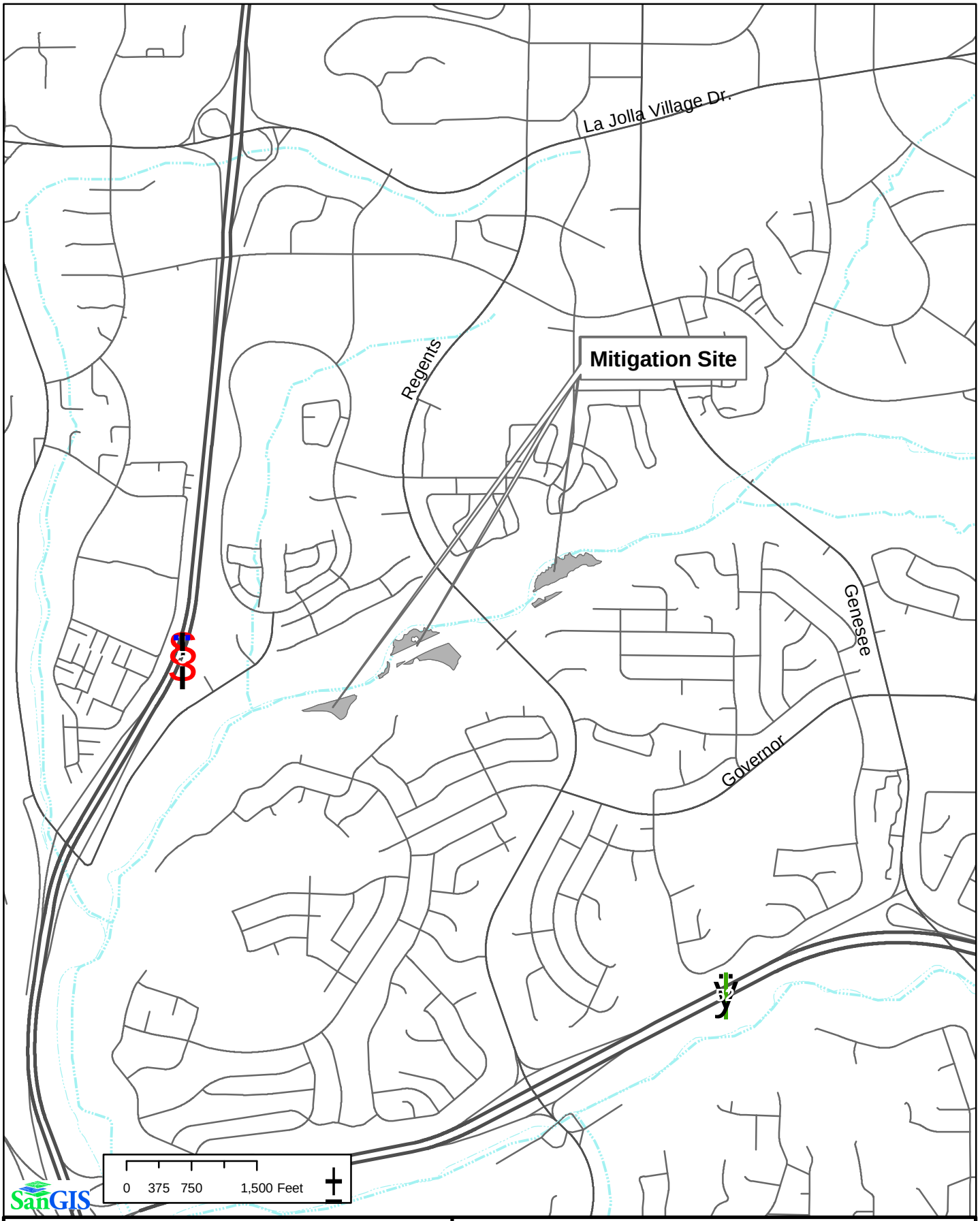
Rose Canyon Mitigation Project

The Rose Canyon Mitigation Project is located in the Rose Canyon Open Space Park, starting approximately one half mile west of Genesee Avenue and continuing another one half mile further west into the park (Figure 4).

The project scope involved grading areas of non-native grassland adjacent to Rose Creek to allow for the establishment of suitable wetland habitat as well as filling areas to restore upland habitat. Approximately 4.36 acres of oak riparian forest, southern cottonwood-willow riparian forest, and mule fat scrub were created adjacent to Rose Creek. Approximately 3.67 acres of Diegan coastal sage scrub habitat was planted on the upland areas.

Construction was initiated in September 2007 and included clearing of non-native vegetation, grading, installation of a temporary irrigation system, planting, hydroseeding, fencing, and sign installation. The initial revegetation installation was accepted in March 2008, when the site entered the 120-day plant establishment period (PEP). The 120-day PEP was accepted and the project entered long-term maintenance on July 15, 2008. The project is currently in its fourth year of maintenance. Irrigation was turned off in the Fall of 2011. The site has met and exceeded year 5 success standards with over 90% vegetative cover in the wetlands and over 80% in the uplands. The site will continue to be monitored and maintained through the completion of the 5 year long-term maintenance period.

Rose Canyon Mitigation Project site



SanGIS

Rose Canyon Mitigation Site

Vicinity Map

Figure 4

San Clemente Canyon Mitigation Project

The San Clemente Canyon Mitigation Project provides mitigation for impacts associated with Public Utilities projects (San Clemente Canyon Maintenance and Access Plan, emergency repairs, etc) within San Clemente Canyon/Marian Bear Memorial Park and surrounding watershed. The project is located at two sites within the park, one just east of the Regents East parking area and the other approximately three-fourths of a mile east of the Genesee parking area (Figure 5).

The project includes the creation of 2.2 acres of wetland habitat (southern willow riparian forest and oak riparian forest) and 3.3 acres upland habitat (Diegan coastal sage scrub and native grassland).

Construction was initiated in October 2007. The plant establishment period for the site was met in September 30, 2008. The upland and wetland planting areas for the project have shown steady establishment of target species. The majority of the upland planting areas are dominated by established Diegan coastal sage scrub and California native grassland species. One upland area at the Regents site has naturally trended to a transitional wetland habitat, and additional container plants were installed in 2011 to enhance diversity within this area. Additional sycamore trees were planted in the winter of 2011/2012 following a request from the community. The project will start its 5th year of maintenance and monitoring in September 2012.

San Clemente Canyon Mitigation Project site

San Clemente Mitigation Project
Vicinity Map
Figure 5

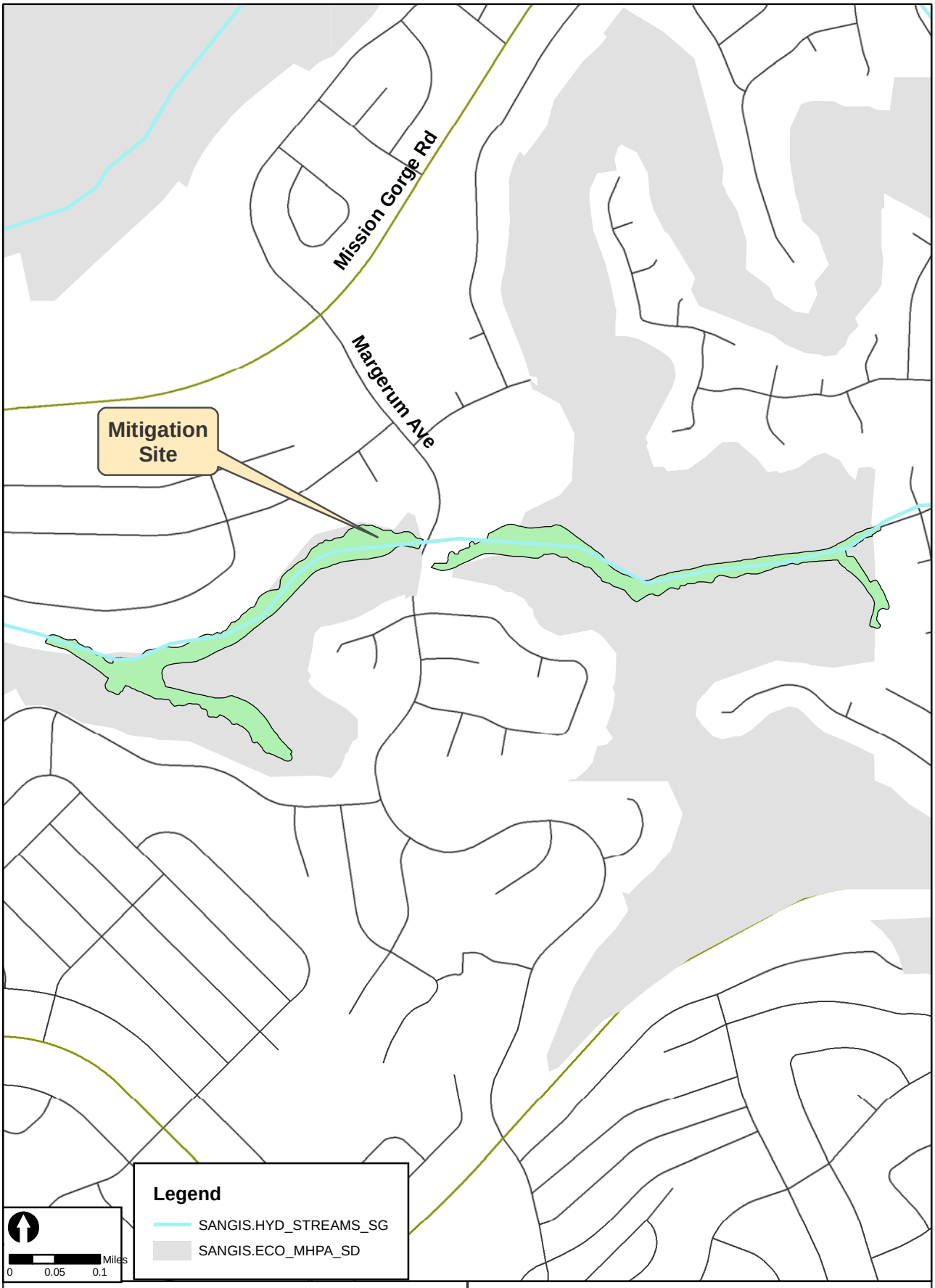
Rancho Mission Canyon Wetland Enhancement Project

The Rancho Mission Canyon Wetland Enhancement Project is located in the City's Rancho Mission Canyon Open Space Park, south of Mission Gorge Road, north of Navajo Road, and on either side of Margerum Way in the Allied Gardens Community of the Navajo Community Planning Area (Figure 6).

The Rancho Mission Mitigation Project includes the enhancement of 7.59-acres of wetlands and restoration of 1.53 acres of wetland transitional habitats. Non-native vegetation was removed from the canyon, followed by revegetation with native southern willow scrub and wetland transitional species. An additional 4.5 acres is being maintained weed free, but is not planted. The total area of habitat enhancement runs the entire canyon bottom and encompasses more than 13.5 acres. Exotic species targeted for eradication include: salt cedar (*Tamarix* sp.), myoporum (*Myoporum laetum*), Brazilian pepper (*Schinus terebinthifolius*), pampas grass (*Cortaderia selloana*), Mexican fan palm (*Washingtonia robusta*), and eucalyptus (*Eucalyptus* spp.).

The site is currently in year 5 of the long-term maintenance and monitoring period. Year 4 annual quantitative monitoring documented high species diversity and native vegetative cover percentages of 98.6%. The enhancement site has exceeded year 4 and 5 success criteria for native cover. Irrigation has been shut off to allow the wetland transitional and wetland areas to naturalize and establish. The site will be monitored and maintained for the remainder of the fifth year of maintenance; agency approval and sign off is expected in the spring of 2013.

Rancho Mission Canyon Wetland Enhancement Project



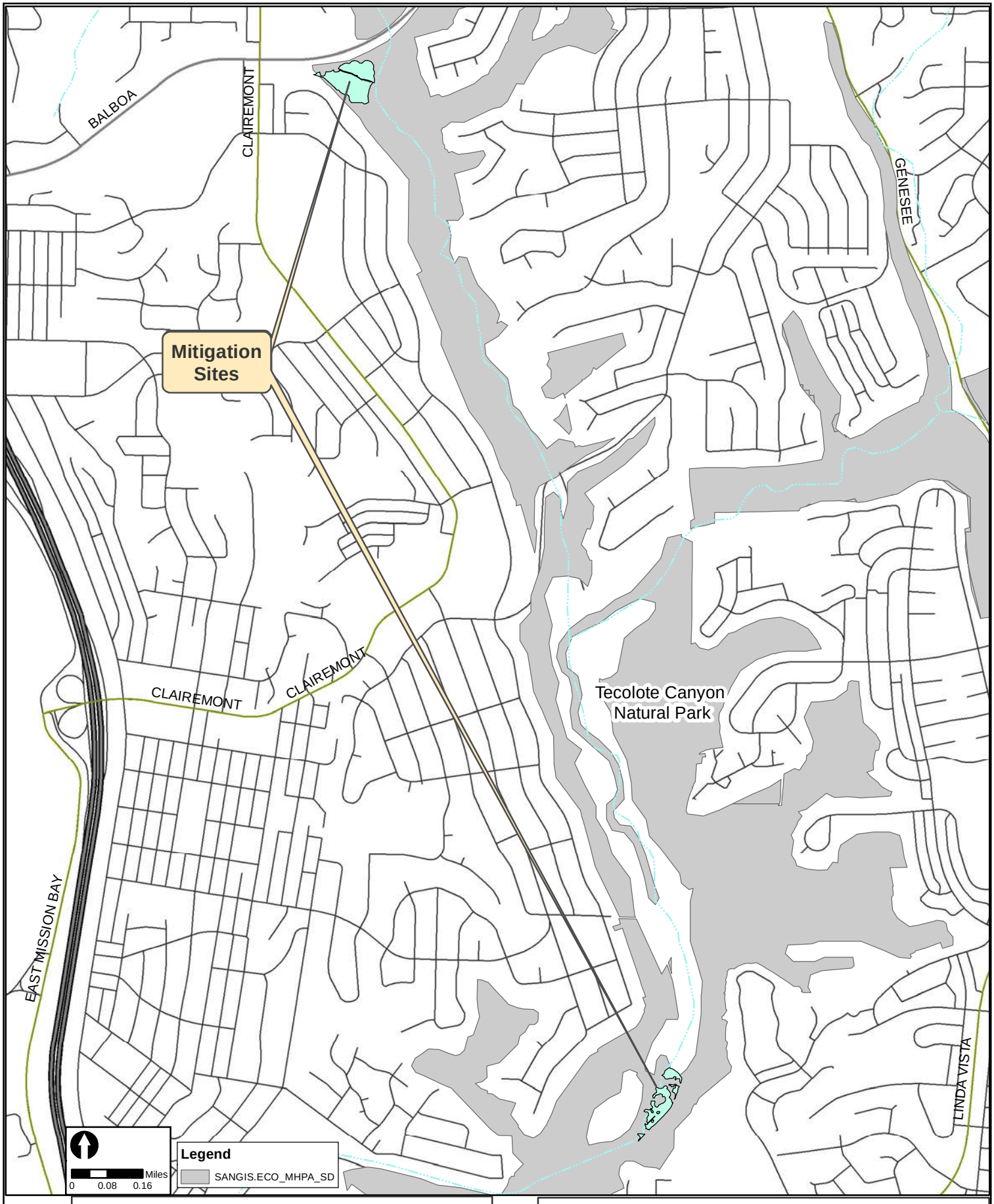
Rancho Mission Mitigation
Vicinity Map
Figure 6

Tecolote Canyon Mitigation Project

The Tecolote Canyon Mitigation Project provides mitigation for upland and wetland impacts associated with implementation of past emergency and long term access path impacts within Tecolote, Mt. Elbrus, East Clairemont, and Manning Canyons. The Balboa site is located south of Balboa Avenue, and the Grove site is located south of the Tecolote Golf Course and north of the University of San Diego (Figure 7).

The project includes the creation of 1.6 acres of wetland habitat (southern willow scrub and oak riparian forest) and restoration of 2.91 acres upland habitat (Diegan coastal sage scrub). Construction was initiated in February 2007 and continued until July 31, 2007. Final acceptance of the 120-day plant establishment period occurred in January 2008, which marked the beginning of the five-year maintenance and monitoring period. The four year success criteria of 75% coverage of wetland vegetation transects and 60% coverage of upland vegetation transects have been exceeded by all plant communities. The site is currently in the fifth year of maintenance and monitoring.

Tecolote Canyon Mitigation Project site



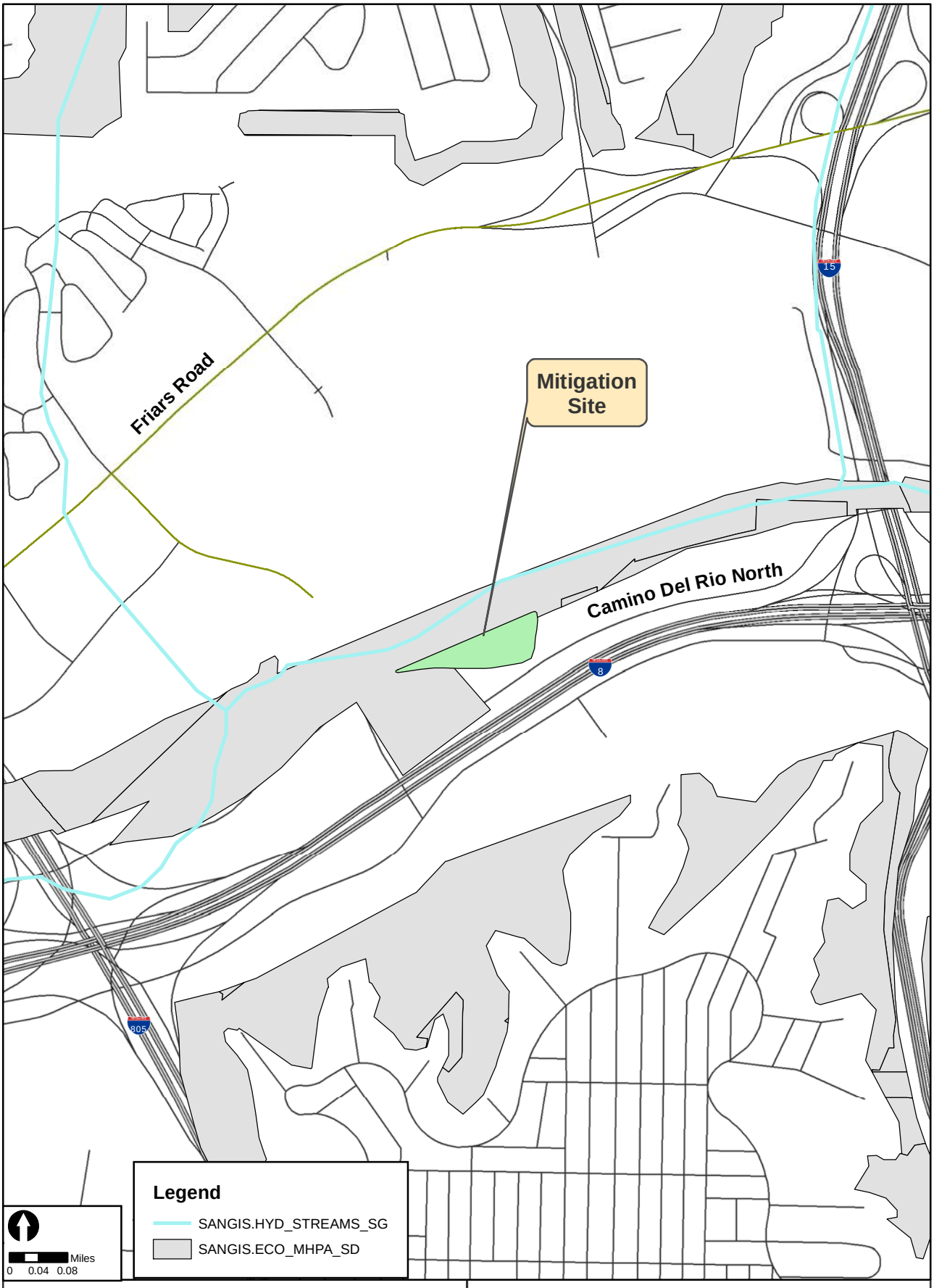
Tecolote Canyon Mitigation
Vicinity Map
Figure 7

San Diego River Wetland Creation Project

The San Diego River Wetland Creation Project is located on a Public Utilities owned parcel located immediately adjacent to the southerly bank of the San Diego River, north of Camino Del Rio North, west of Interstate 15, and east of Mission Center Parkway in the Mission Valley Community of the City of San Diego (Figure 8).

The site includes the creation of approximately 3.43 acres of native riparian habitat and approximately 2 acres of Diegan coastal sage scrub habitat. The project site was graded in the fall of 2005 to create a basin along the southern bank of the San Diego River. The basin was planted and hydroseeded with native species in the winter of 2005/2006 followed by a 120-Day Plant Establishment Period. The long-term maintenance, monitoring, and reporting program started June 14, 2006 and the site successfully completed 5 years of maintenance and monitoring in June of 2011. Native vegetation has established well with wetland trees exceeding 14 feet in height. The wetland basin receives flows from the San Diego River during high water events (rainfall) which contributes nutrients and provides the necessary hydrology. Wildlife is using the site with numerous songbird nests observed in the wetland area. A MHPA boundary line adjustment was approved by the Wildlife Agencies and is being finalized by the City to add the mitigation site into the MHPA.

San Diego River Wetland Creation Project site



San Diego River Mitigation Project
Vicinity Map
Figure 8

Los Peñasquitos North Wetland Creation Project

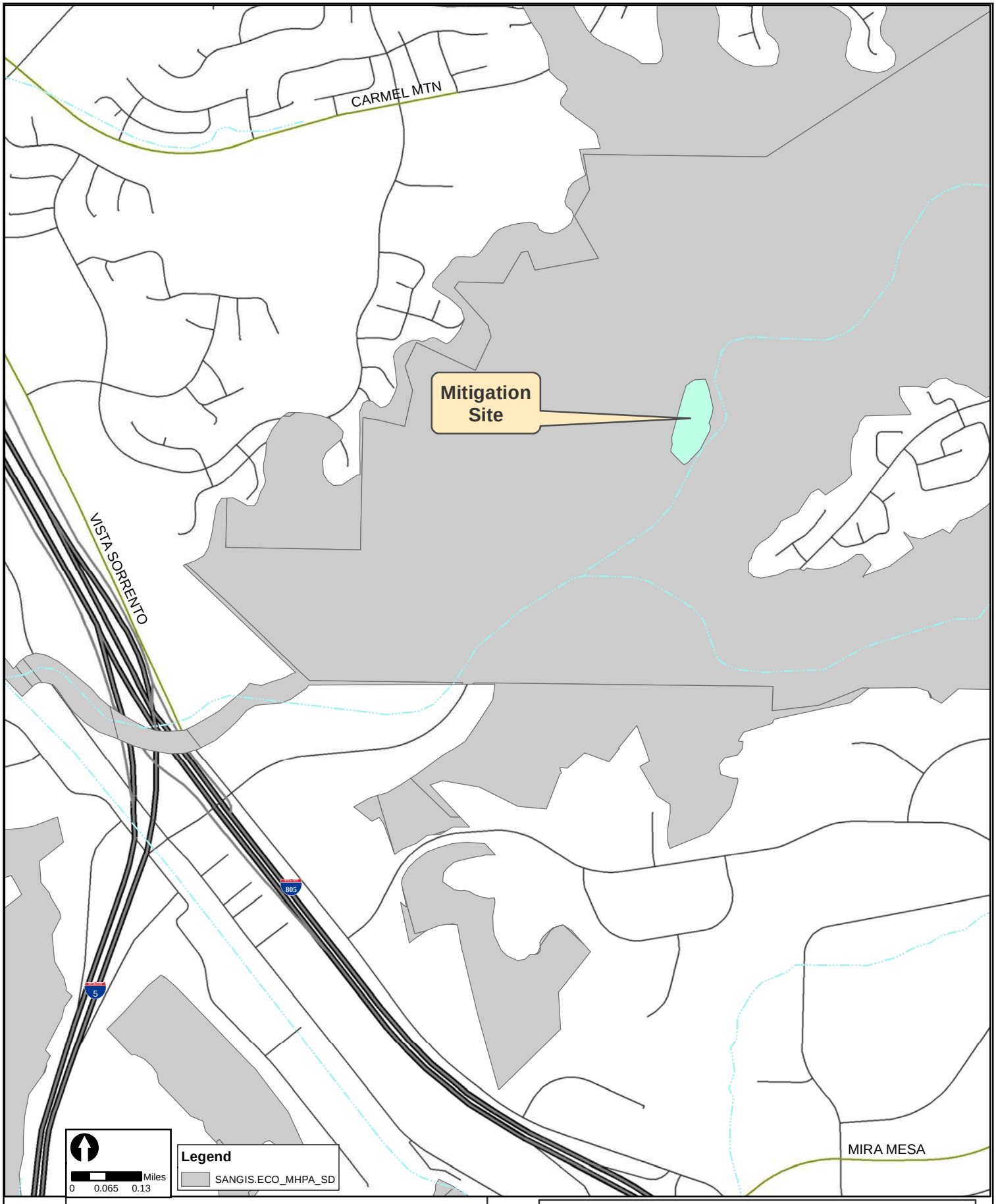
The Los Peñasquitos North Wetland Creation Project is located in the City of San Diego's Los Peñasquitos Canyon Preserve in the community of Peñasquitos, just north of the Los Peñasquitos Creek (Figure 9).

The project includes the creation of 3.8 acres of wetland habitat, including 3.15 acres of southern willow scrub, 0.43 acres of cottonwood/sycamore woodland, and 0.22 acres of freshwater marsh. The site also includes one acre of coastal sage scrub habitat to serve as a buffer on the north edge of the site.

The project site is characterized by a diverse mosaic of native vegetative cover including trees, shrubs, and a herbaceous layer. The site provides high quality habitat for a number of wildlife species which have been observed foraging onsite.

Regulatory sign-off and approval for the project was received in the spring of 2012.

Los Peñasquitos North Wetland Creation Project site



Los Penasquitos North Wetland Creation Project
Vicinity Map
Figure 9

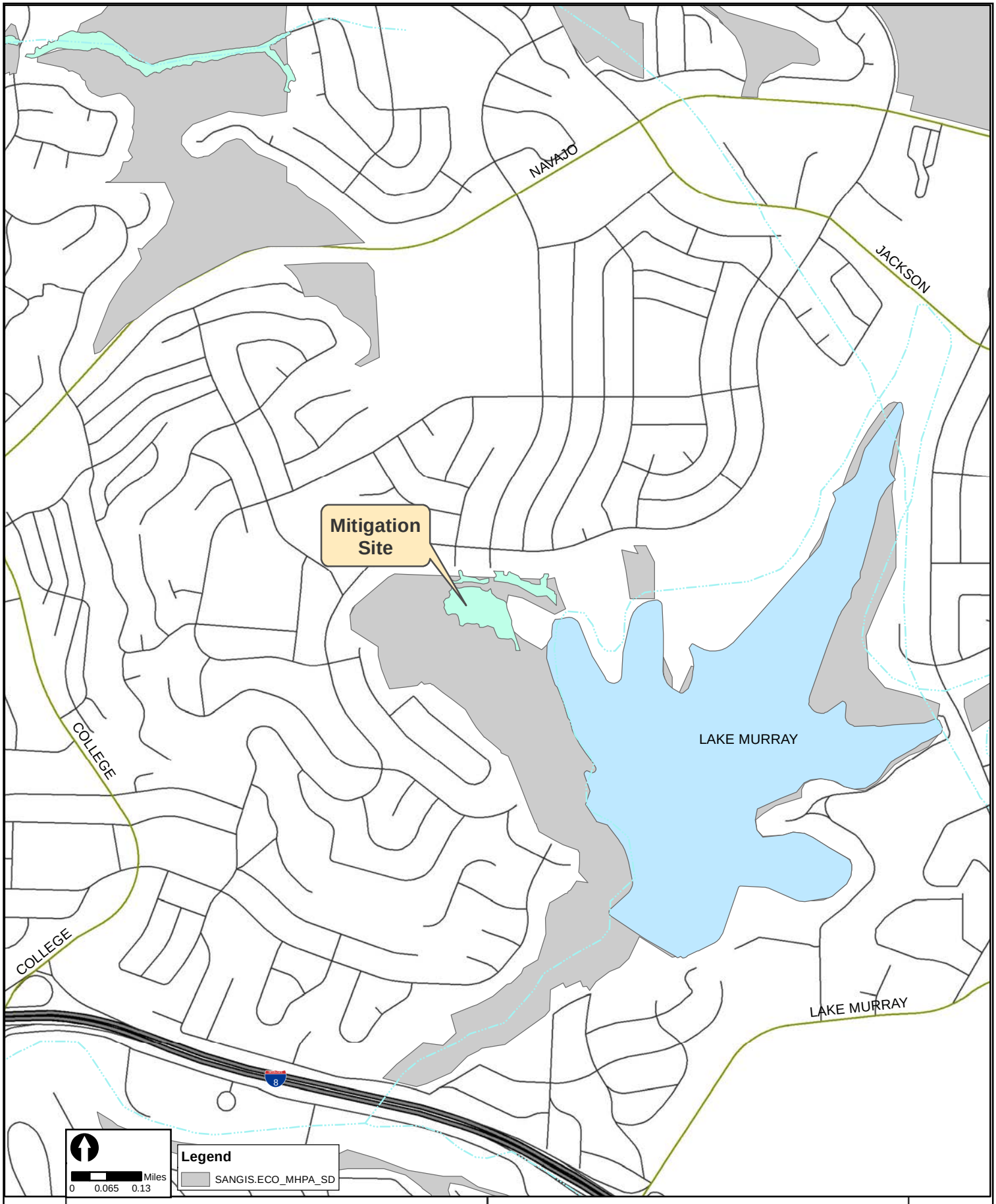
Lake Murray Mitigation Project

The Lake Murray Mitigation Project is in the City of San Diego's Mission Trails Regional Park. It is located in the area just west of Lake Murray in the Del Cerro neighborhood of the Navajo Community (Figure 10).

The mitigation site includes 2.5 acres of wetland enhancement (southern willow scrub habitat) and just over 5.2 acres of upland restoration area (Diegan coastal sage scrub). Gnatcatcher and quail have regularly been spotted foraging within the upland area.

The site was installed September 2005 through June 2006. Official sign-off was received from California Department of Fish and Game (CDFG) in March 2010 and from Army Corp of Engineers (ACOE) on December 7, 2011.

Lake Murray Mitigation Site



Lake Murray Mitigation Project
Vicinity Map
Figure10

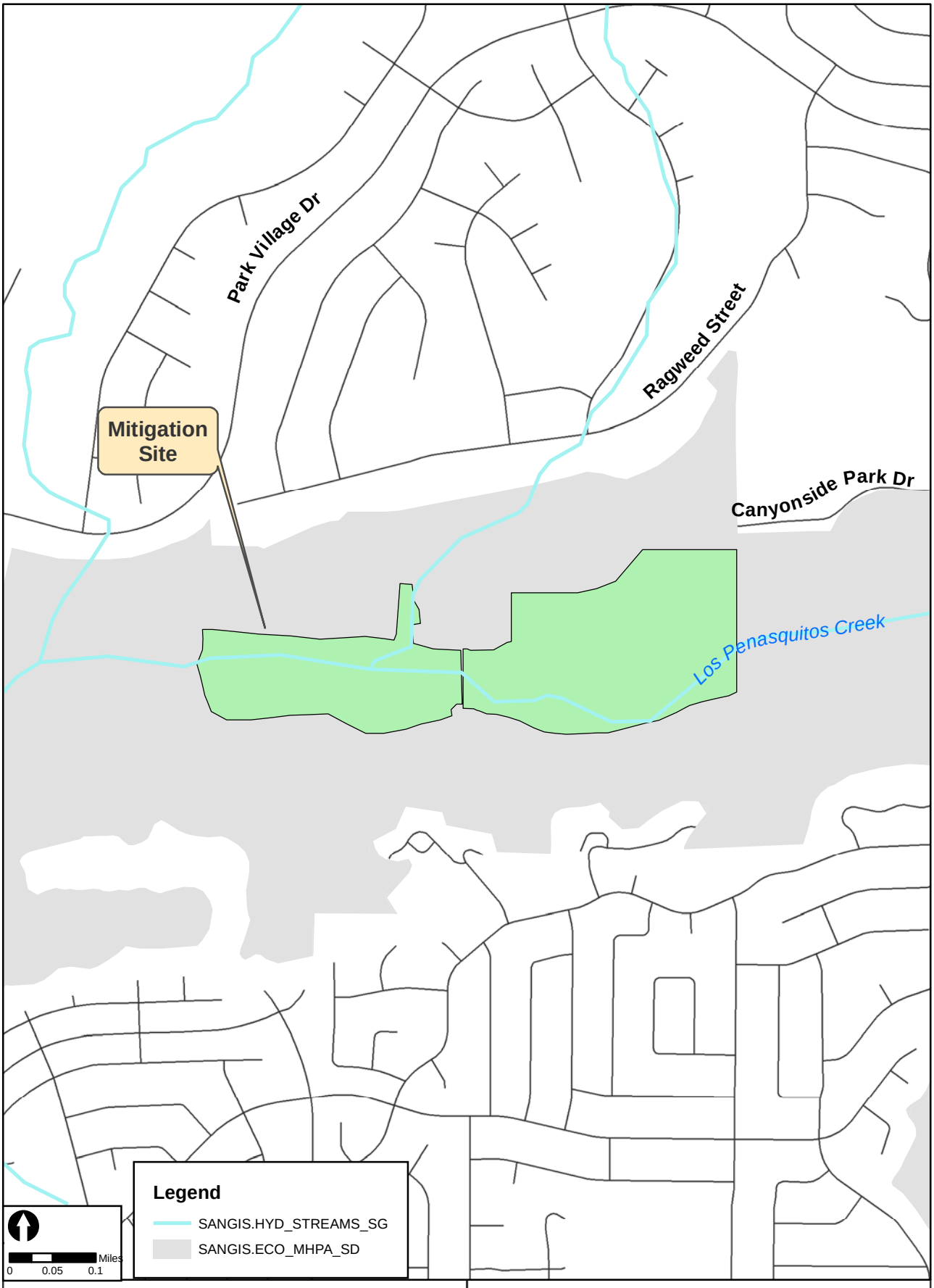
El Rancho Peñasquitos Wetland Enhancement Project

The mitigation site is located along Los Peñasquitos Canyon approximately 0.5 mile west of Black Mountain Road in the vicinity of the historically designated Johnson Taylor Adobe of Rancho de los Peñasquitos (City of San Diego HRB Site #75). The site is within the MHPA on County and City of San Diego Open Space Land (Figure 11).

The El Rancho Peñasquitos Wetland Enhancement Mitigation Project includes enhancement of 5.53 acres of southern cottonwood willow riparian forest. Non-native plant species eradicated during the enhancement effort include Canary Island date palm (*Phoenix canriensis*), Mexican fan palm (*Washingtonia robusta*), Peruvian pepper tree (*Schinus molle*), Brazilian pepper tree (*Shinus terebinthifolius*), eucalyptus (*Eucalyptus* spp.), edible fig (*Ficus carica*), and artichoke thistle (*Cynara cardunculus*).

Results from the Final Monitoring Report outline a 100% eradication of target plant species from the entire project area within Los Penasquitos Creek. Treated plants have started to deteriorate and decompose, allowing for the establishment of native species in their direct vicinity. The El Rancho Peñasquitos Wetland Enhancement Project has met the success criteria outlined in the Conceptual Mitigation Plan and received regulatory sign-off in early 2010.

El Rancho Peñasquitos Wetland Enhancement Project site



El Rancho Penasquitos Mitigation
Vicinity Map
Figure 11

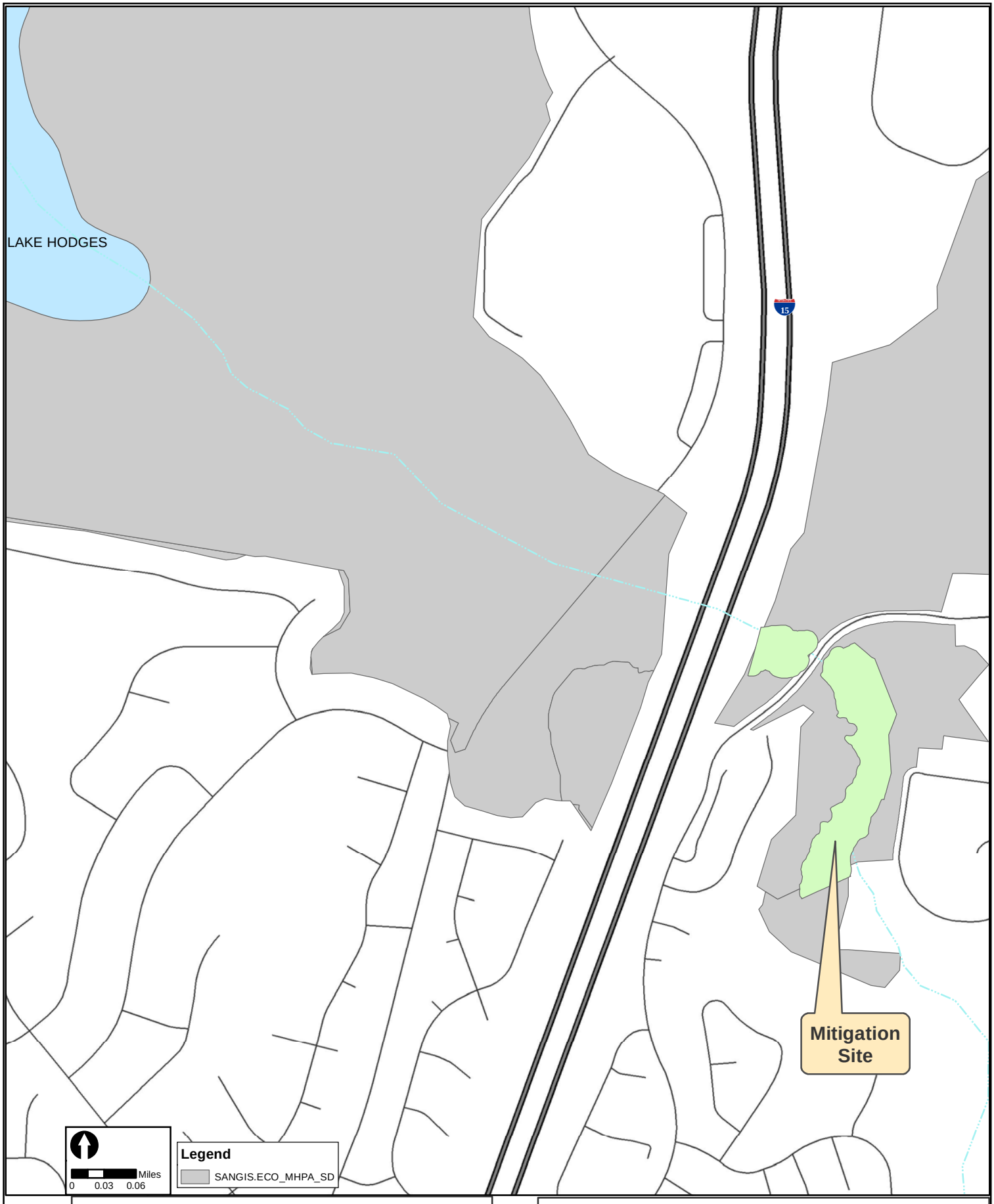
Rancho Bernardo Mitigation Project

A conceptual mitigation plan has been prepared and approved by the Army Corps of Engineers and California Department of Fish and Game. The project would be located east of I-15, west of Cotorro Road and south of Escala Drive in Rancho Bernardo Canyon (Figure 12).

The project area currently supports a large area of invasive non-native plant species that have little value for wildlife. The site currently supports California fan palms (*Washingtonia filifera*), pampas grass (*Cortaderia jubata*), castor bean (*Ricinus communis L.)*, and tree tobacco (*Nicotiana glauca*). The goal of the mitigation project will be to eradicate all non-native plant species and establish native wetland habitat.

Public Utilities has postponed implementation of this project and will reassess mitigation needs for this watershed on an annual basis.

Rancho Bernardo Mitigation Project Site



Rancho Bernardo Mitigation
Vicinity Map
Figure 12

25 Month Revegetation and Restoration Projects Status Table (2008-2012)
August 2012

Active Projects

Canyon/ Project	Reveg or Restoration*	Size (Acre)	Start of 25 Months	Seeding Date	Planting Date	End of 25 Months	PM	Status
Rose (MH 476)	Reveg/Rest	<0.01	11/2008	11/2008	1/4/2012	Ongoing	White	Not enough vegetative cover. Will continue maintenance until meet coverage requirements.
Rancho Mission Slope Repair	Restoration	0.05	6/10/2010	6/10/2010	10/ 2010	7/2012	Balo	On Target. Erosion control replaced 12/2011
Lake Hodges	Restoration	0.03	7/1/2010	7/1/2010	N/A	8/1/2012	Domasco	25 months Monitoring
Menlo and Redwood	Restoration	0.2	11/17/2010	6/2010	11/17/2010	12/17/2012	Smith	On target
East Tecolote	Reveg/Rest	0.05	11/24/2010	11/24/2010	N/A	12/24/2012	White	On target
Lexington Water Emergency (Water)	Restoration	0.03	1/2011	9/2010	1/2011	2/2013	Domasco	On target
Lake Murray (Water)	Restoration	0.02	1/2011	1/2011	1/2011	2/2013	Balo	On target
San Clemente Emergency	Revegetation	<0.01	1/2011	N/A	N/A	2/2013	Balo	25 months Monitoring
San Clemente MH 4 Access	Revegetation	<0.01	2/2011	2/2011	N/A	3/2013	Balo	On target, monitoring only
Plaza Ridge (Water)	Revegetation	0.18	1/19/2011	1/19/2011	N/A	2/19/2013	Smith	On target
Waring Road	Restoration	0.5	4/2009	4/2009	N/A	4/2013	VanEvery	Ongoing maintenance.
33rd and Maple	Revegetation	<0.01	3/16/2011	3/16/2011	N/A	4/16/2013	Smith	On target
Mission Center Canyon	Restoration	0.22	4/29/2011	10/1/2011	N/A	5/29/2013	White	On target. 25 months
Rose Sinkhole	Reveg/Rest	0.03	5/23/2011	5/3/ 2011	5/23/2011	6/23/2013	White	On target
Carmel Valley Rd (Water)	Revegetation	<0.01	5/20/ 2011	12/1/2011	N/A	6/20/2013	Balo	On target.
Upas Street	Revegetation	0.04	9/29/2011	9/29/2011	N/A	10/29/2013	Smith	On target.
Central Tecolote MH 159	Revegetation	<0.01	5/9/2011	5/9/2011	N/A	6/6/2013	Balo	25 months Monitoring
Dwane and Elaine	Restoration	0.02	6/29/2011	6/29/2011	N/A	7/29/2013	Smith	On target
Admiral Baker	Revegetation	<0.01	7/21/2011	7/21/2011	N/A	8/21/2013	Balo	25 months Monitoring
Hotel Circle South Emergency	Restoration	0.10	11/9/2011	7/26/2011	11/15/2011	12/9/2013	Smith	In 25 month maintenance period
Euclid and Menlo Restoration	Restoration	0.2	11/16/2011	9/10/2011	11/17/2011	12/16/2013	Smith	In 25 Month Maintenance
Chollas/YMCA (Water)	Revegetation	0.01	1/18/2012	9/20/2011	1/18/2012	2/18/2014	Domasco	In 25 Month Maintenance
Mission Center B Crossings	Revegetation	0.17	9/15/2011	N/A	N/A	10/15/2013	Balo	In 25 Month Maintenance
Lakeside Ave Emergency (Water)	Revegetation	0.3	4/15/2012	4/9/2012	06/14/2012	07/14/2014	White	In 25 Month Maintenance
East Tecolote Area C	Revegetation	<0.01	12/19/2011	12/19/2011	N/A	01/19/2014	Balo	In 25 Month Maintenance

Completed Projects				
Canyon/ Project	Revegetation or Restoration	Project Initiation	Project Completion	PM
PS 30	Restoration	4/2010	7/2012	Van Every
Oklahoma Street	Restoration	5/2010	6/2012	Domasco
Lopez MH 102	Restoration	5/2010	6/2012	Domasco
Valeta Street	Revegetation	5/2/2010	6/2012	Santos
South Juniper	Reveg/Rest	11/2009	2/9/2012	Domasco
Tecolote MH 346	Restoration	9/2009	11/2011	Domasco
San Pasqual Pipe Repair	Erosion Control	4/5/2007	9/18/2011	Balo
7th and Brookes	Revg/Rest	11/2008	9/18/2011	Domasco
Washington Creek	Erosion Control	2/1/2008	4/30/2011	Balo
Switzer	Reveg/Rest	11/2008	4/30/2011	Domasco
Mt Ashmun	Reveg/Restoration	10/2009	4/30/2011	Domasco
Lexington (Jaimes Way)	Reveg/Restoration	1/2009	4/30/2011	Balo
Dakota	Reveg/Rest	9/2008	11/26/2010	Domasco
Miramar TS	Reveg/Rest	10/28/2007	9/26/2010	White
Buchanan/Maryland St	Restoration	1/15/2008	4/22/2010	White
Fairmount and Home	Reveg/Rest	5/31/05	4/22/2010	White
Norfolk	Reveg/Rest	10/19/07	4/22/2010	Balo
Juniper and 28th	Reveg	2/15/2008	4/22/2010	Balo
Spruce	Reveg	11/2007	5/2009	Balo
Mission Valley	Reveg/Rest	5/20/2005	1/2009	Ball
Mt Elbrus	Reveg/Rest	9/21/2004	5/2009	Ball
Manning	Reveg	10/22/04	1/2009	Domasco
54th Street	Reveg/Rest	6/27/2006	5/2009	Balo
Alvarado	Reveg/Rest	11/7/2006	5/2009	Balo
Caminito Fuente	Reveg	8/8/06	1/2009	Balo
South Juniper	Reveg/Rest	1/24/2006	5/2009	Domasco
Delevan	Reveg/Rest	3/3/2006	5/2009	Domasco
Felton and Ivy	Restoration	3/21/2007	8/2009	Balo
Escala Drive	Erosion Control	1/2/2008	8/2009	Balo
Polvera Drive	Erosion Control	1/3/2008	8/2009	Balo
Willow St	Reveg	5/2005	8/2009	Smith
Spruce	Erosion Control	11/2007	8/2009	Balo
Buchanan	Reveg	1/18/2005	1/19/08	White
Park Mesa	Reveg/Rest	10/22/04	7/19/2008	Domasco
Tecolote	Reveg	10/22/04	7/19/2008	Domasco

**Under the Public Utilities Department (PUD) Programmatic Environmental Impact Report (PEIR) and Master Site Development Permit for the Canyon Sewer Cleaning and Long-Term Maintenance Access Program (Program), restoration refers to on-site vegetative remediation for impacted areas which are outside of the long-term maintenance access path. Revegetation refers to implementation of erosion control of long-term maintenance access paths. Restoration and erosion control are required by the PEIR and Master Site Development Permit. Although revegetation is one method of erosion control, other treatments such as an application of decomposed granite or wood fiber mulch may be implemented if preferred by the respective community. Alternative treatments may also be required by the Parks and Recreation Department for access paths and recreational trails which occur within City open space.*